

**Listing of Claims**

1. – 26. (cancelled)

27. (Currently Amended) A substantially pure GD2 ligand of amino acid sequence  
QGITINYNNSALM (SEQ ID NO: 3) Formula I:

$Z_1-X_1-X_2-X_3-X_4-X_5-X_6-X_7-X_8-X_9-X_{10}-X_{11}-X_{12}-X_{13}-Z_2 \text{ (I)}$

wherein

$X_1$  is absent or  $V$  or an analogue thereof;

$X_2$  is absent or  $C$  or an analogue thereof;

$X_3$  is  $G$  or  $Y$  or an analogue thereof;

$X_4$  is  $G$  or  $C$  or  $Y$  or an analogue thereof;

$X_5$  is  $I$  or  $C$  or an analogue thereof;

$X_6$  is  $T$  or  $A$  or an analogue thereof;

$X_7$  is  $N$  or an analogue thereof;

$X_8$  is  $V$  or an analogue thereof;

$X_9$  is  $N$  or  $G$  or an analogue thereof;

$X_{10}$  is  $S$  or  $C$  or  $V$  or  $T$  or an analogue thereof;

$X_{11}$  is  $A$  or  $C$  or  $Y$  or  $H$  or  $S$  or an analogue thereof;

$X_{12}$  is absent or  $L$  or  $C$  or  $Y$  or an analogue thereof;

$X_{13}$  is absent or  $M$  or  $Y$  or an analogue thereof;

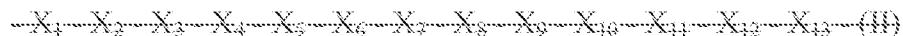
$Z_1$  is an  $N$ -terminal group of the formula  $\text{H}_2\text{N}-\text{RHN}$  or,  $\text{RRN}$ ;

$Z_2$  is a  $C$ -terminal group of the formulas  $-\text{C}(\text{O})\text{OH}$ ,  $-\text{C}(\text{O})\text{R}$ ,  $-\text{C}(\text{O})\text{OR}$ ,  $-\text{C}(\text{O})\text{NHR}$ ,  
 $-\text{C}(\text{O})\text{NRR}$ ;

$\text{R}$  at each occurrence is independently selected from  $-(\text{C}_2\text{–C}_6)\text{-alkyl}$ ,  $-(\text{C}_2\text{–C}_6)$  alkenyl,  $-(\text{C}_2\text{–C}_6)$  alkynyl,  $-(\text{C}_2\text{–C}_6)$  alkenyl, substituted  $-(\text{C}_2\text{–C}_6)$  alkyl, substituted  $-(\text{C}_2\text{–C}_6)$  alkenyl, or substituted  $-(\text{C}_2\text{–C}_6)$  alkynyl;

and wherein “—” is a covalent linkage.

28. (Currently Amended) A substantially pure synthetic GD2 ligand or recombinant GD2 ligand having a domain of amino acid sequence GGITNYNSALM (SEQ ID NO: 3) Formula II



wherein

$X_1$  is absent or  $Y$  or an analogue thereof;

$X_2$  is absent or  $C$  or an analogue thereof;

$X_3$  is  $G$  or  $Y$  or an analogue thereof;

$X_4$  is  $G$  or  $C$  or  $X$  or an analogue thereof;

$X_5$  is  $I$  or  $C$  or an analogue thereof;

$X_6$  is  $T$  or  $A$  or an analogue thereof;

$X_7$  is  $N$  or an analogue thereof;

$X_8$  is  $Y$  or an analogue thereof;

$X_9$  is  $N$  or  $G$  or an analogue thereof;

$X_{10}$  is  $S$  or  $C$  or  $V$  or  $T$  or an analogue thereof;

$X_{11}$  is  $A$  or  $C$  or  $V$  or  $H$  or  $S$  or an analogue thereof;

$X_{12}$  is absent or  $L$  or  $C$  or  $V$  or an analogue thereof;

$X_{13}$  is absent or  $M$  or  $Y$  or an analogue thereof;

and wherein " " is a covalent linkage.

29. (Previously Presented) The GD2 ligand of claim 27, wherein the ligand further comprises a cyclic linkage between any two of  $X_1$  through  $X_{13}$ .

30. (Previously Presented) The GD2 ligand of claim 28, wherein the ligand further comprises a cyclic linkage between any two of  $X_1$  through  $X_{13}$ .

31 - 32. (Canceled)

33. (Withdrawn and Currently Amended) A method of treating a subject having a disease wherein disease cells express GD2, the method comprising administering to the subject ~~an effective amount of~~ the GD2 ligand of claim 27.

34. (Withdrawn and Currently Amended) A method of treating a subject having a disease wherein disease cells express GD2, the method comprising administering to the subject ~~an effective amount of~~ the GD2 ligand of claim 28.

35. (Withdrawn and Currently Amended) A method of treating a subject having a disease wherein disease cells express GD2, the method comprising administering to the subject ~~an effective amount of~~ the GD2 ligand of claim 29.

36. (Withdrawn and Currently Amended) A method of treating a subject having a disease wherein disease cells express GD2, the method comprising administering to the subject ~~an effective amount of~~ the GD2 ligand of claim 30.

37. (Withdrawn and Currently Amended) A method of treating a subject having a disease wherein disease cells express GD2, the method comprising administering to the subject ~~an effective amount of~~ the GD2 ligand of claim 31.

38. (Withdrawn) A method of diagnosis of a disease wherein disease cells express GD2, comprising determining whether a cell from a subject binds to the GD2 ligand of claim 27.

39. (Withdrawn) A method of diagnosis of a disease wherein disease cells express GD2, comprising determining whether a cell from a subject binds to the GD2 ligand of claim 28.

40. (Withdrawn) A method of diagnosis of a disease wherein disease cells express GD2, comprising determining whether a cell from a subject binds to the GD2 ligand of claim 29.

41. (Withdrawn) A method of diagnosis of a disease wherein disease cells express GD2, comprising determining whether a cell from a subject binds to the GD2 ligand of claim 30.

42. (Withdrawn) A method of diagnosis of a disease wherein disease cells express GD2, comprising determining whether a cell from a subject binds to the GD2 ligand of claim 31.

43. (Withdrawn) The method of claim 38 wherein the method is carried out *in vitro*.

44. (Withdrawn) The method of claim 38 wherein the method is carried out *in vivo*.

45. (Withdrawn and Currently Amended) The method of claim 33, further comprising administering to the patient ~~an effective amount of~~ granulocyte-macrophage colony-stimulating factor.

46. (Currently Amended) A pharmaceutical composition comprising the GD2 ligand of claim 27, together with ~~an effective amount of~~ granulocyte-macrophage colony-stimulating factor.

47. (Currently Amended) A pharmaceutical composition comprising the GD2 ligand of claim 28, together with ~~an effective amount of~~ granulocyte-macrophage colony-stimulating factor.

48. (Previously Presented) A commercial package comprising the GD2 ligand of claim 27, together with instructions for using the GD2 ligand to modulate GD2 activity or detect cells expressing GD2.

49. (Previously Presented) A commercial package comprising the GD2 ligand of claim 28, together with instructions for using the GD2 ligand to modulate GD2 activity or detect cells expressing GD2.

50. (Withdrawn) The GD2 ligand of claim 28, wherein the GD2 ligand is a recombinant T-cell receptor.

51. (Withdrawn) The GD2 ligand of claim 50, wherein the recombinant T-cell receptor is expressed in a cytotoxic T cell line.

52. (Withdrawn) A method of ablating a cell line, comprising transforming the cell line to provide transformed cells that express GD2, and treating the transformed cells with an effective amount of the GD2 ligand of claim 27.

53. (Withdrawn) A method of ablating a cell line, comprising transforming the cell line to provide transformed cells that express GD2, and treating the transformed cells with an effective amount of the GD2 ligand of claim 28.

54. (Withdrawn) A method of screening to identify or validate a putative GD2 ligand, comprising:

- a) administering a putative GD2 ligand to a system having a GD2 moiety and a p56<sup>Lck</sup> moiety available for association; and,
- b) measuring an association or functional relationship between the GD2 and the p56<sup>Lck</sup> moieties in the system.

55. (Withdrawn) The method of claim 54, wherein the putative GD2 ligand comprises a polypeptide or a non-peptidic analog such as a peptidomimetic that displays the same pharmacophore or has similar side chain functional groups.

56. (Withdrawn) The method of claim 54, wherein the putative GD2 ligand is derived from tenascin-R.

57. (Withdrawn) The method of claim 54, wherein the system is a cell expressing GD2 and p56<sup>Lck</sup>.

58. (Withdrawn) The method of claim 54, wherein the GD2 moiety is native GD2.

59. (Withdrawn) The method of claim 54, wherein the p56<sup>Lck</sup> moiety is native p56<sup>Lck</sup>.

60. (Withdrawn) The method of claim 54, wherein the association between the GD2 and the p56<sup>Lck</sup> moieties is measured by determining a kinase activity of the p56<sup>Lck</sup> moiety.